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## First Year

First semester

Period 1

### Compulsory courses

#### STE1.11 Fluid mechanics

HYDR0007-4 *Fluid mechanics* - Charles DEBOUCHE 14 16 - 3

#### STE1.12 Soil, geotechnics and metrology

GERE0008-3 *Soil mechanics and geotechnics, part 1* - Robert CHARLIER, Frédéric COLLIN 12 12 - 2

GERE0006-4 *Environmental metrology, part 1* - MarieFrance DESTAIN, Benoît MERCATORIS 12 12 - 2

HYDR0006-2 *Modelling of transfers in soils, 1st part* - Aurore DEGRÉ 12 12 - 2

Period 2

### Compulsory courses

#### STE1.21 Group project

GERE0015-1 *Group project* - Marc AUBINET, COLLÉGIALITÉ - - - 6

#### STE1.22 Statistical analysis, geotechnics and metrology

GERE0006-5 *Environmental metrology, part 2* - MarieFrance DESTAIN, Benoît MERCATORIS 12 12 - 2

GERE0008-4 *Soil mechanics and geotechnics, part 2* - Robert CHARLIER, Frédéric COLLIN 12 12 - 2

STAT1213-1 *Multivariate statistical analysis* - Yves BROSTAUX 12 12 - 2

### Optional courses

#### Choose one module from :

#### STE1.23 Machinery and constructions 1/2

GERE0016-1 *Machine elements, 1st part* - MarieFrance DESTAIN 18 18 - 3

GERE0003-2 *Theory of structural calculations, 1st part* - Pierre LATTEUR - Suppl : Vincent DENOËL, JeanMarc FRANSSSEN 36 - - 3

#### STE1.24 Environmental management

ENVT2049-2 *Introduction to environmental assessment* - Charles DEBOUCHE 12 - - 2

HYDR0011-2 *Ecohydrology* - Aurore DEGRÉ - [12h FT] 6 - [+] 2

GESA0001-2 *Chemical and physico-chemical analysis of waters* - JeanPaul BARTHELEMY 8 16 - 2

Second semester

Period 3

### Optional courses

#### Choose one group of modules from "Elements of rural engineering + Machinery and construction 2/2" or "Soil components and environmental quality (module 1 + 2) :

*Notice* : if the module "Machinery and construction 1/2" is chosen during the 1st period, then the modules "Elements of rural engineering" and "Machinery and construction 2/2" are compulsory.

if the module "Environmental management" is chosen during the 2nd period, then the modules "Soil components and environmental quality" are compulsory.

#### Elements of rural engineering and construction engineering 2/2

##### Requisite

"STE1.23 Machines et constructions 1/2"

#### STE1.31 Element of rural engineering

HYDR0010-1 *Open channel hydraulics* - Charles DEBOUCHE 10 14 - 2

GERE0007-1 *Digital electronics, first part* - Bernard HEINESCH 16 18 - 2

HYDR0004-1 *Irrigation* - Aurore DEGRÉ, Sarah GARRÉ 24 - - 2

#### STE1.32 Machinery and construction 2/2

GERE0011-2	<i>Building physics and special techniques, 1st part</i> - Frédéric LEBEAU	24	12	-	3
GERE0017-1	<i>Machine elements, 2nd part</i> - MarieFrance DESTAIN - [3h AUTR]	15	18	[+]	3

#### Soil components and environmental quality

Requisite "STE1.24 Gestion de l'environnement"

#### STE1.33 Soil components and environmental quality

GEOP0007-2	<i>Soil components and the environment, 1st part</i> - Jean Marie MARCOEN - [4h AUTR]	24	8	[+]	3
HYDR0005-3	<i>Hydrogeology and groundwater management</i> - Jean Marie MARCOEN - [4h AUTR, 4h SEM, 8h FT]	14	6	[+]	3

#### STE1.34 Soil components and environmental quality

CHIM9249-1	<i>Microbial ecology</i> - Frank DELVIGNE	18	6	-	2
GEOP0003-2	<i>Pedogenesis and international system of reference</i> - Laurent BOCK - [6h AUTR]	18	-	[+]	2
GEOP0007-3	<i>Soil components and the environment, 2nd part</i> - Jean Marie MARCOEN	18	6	-	2

Period 4

#### Compulsory courses

##### STE1.41 Placement

MANA0004-1	<i>Portfolio (Master 1)</i> - Philippe LEPOIVRE	-	-	-	2
RSTG0003-1	<i>Internship and professional relations</i> - Frédéric LEBEAU, Philippe LEPOIVRE	-	-	-	3

Period 5

#### Compulsory courses

##### STE1.51 Data acquisition and modelling

HYDR0003-2	<i>Applied hydrology</i> - Aurore DEGRÉ	6	18	-	2
PHYS3009-3	<i>Exchange Models in biosystems</i> - Marc AUBINET	-	24	-	2
HYDR0006-3	<i>Modelling of transfers in soils, 2nd part</i> - Aurore DEGRÉ	12	12	-	2

#### Optional courses

Chose a module between : "Complement of engineering" and "applied pedology" :

*Notice* : if the module 'Machines and construction 1/2' was chosen in Period 2, then the module 'Additional Engineering' is compulsory.

if the module 'Environmental management' is chosen in Period 2 then the module 'Applied Pedology' is compulsory.

#### STE1.52 Complements of engineering

Requisite "Eléments de génie rural et Machines et construction 2/2"

ENVT3010-2	<i>Surveying</i> - Charles DEBOUCHE	16	8	-	2
HYDR0008-1	<i>Hydraulic pump and network</i> - Charles DEBOUCHE	10	14	-	2
GERE0003-4	<i>Theory of structural calculations, 2nd part</i> - Pierre LATTEUR - Suppl : Laurent DUCHENE	24	-	-	2

#### STE1.53 Applied pedology

Requisite "Constituants des sols et qualité des milieux"  
"STE1.24 Gestion de l'environnement"

FORE0008-2	<i>Site analysis and valuation</i> - Hugues CLAESSENS	14	22	-	3
GEOP0005-2	<i>Applied regional geomorphopedology</i> - Laurent BOCK - [18h FT]	12	6	[+]	3

All year round

Period 6

#### Compulsory course

##### STE1.61 English

LANG2956-1	<i>Practice of specialized English for Environmental Sciences and Technology: part 1</i> - Aurore DEGRÉ, Sophie DEPOTERRE, MarieFrance DESTAIN, Estelle MAYARD, Benoît MERCATORIS	-	24	-	4
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#### Second Year

First semester

**Compulsory courses (period 1 and 2)**

**STE2.10 English**

LANG2957-1 *Practice of specialized English for Environmental Sciences and Technology: part 2* - - 36 - 3  
Gilles COLINET, Sophie DEPOTERRE, Estelle MAYARD

**Optional courses**

*Choose one option from the following :*

**"Environmental sciences and technologies" courses programme**

**Period 1**

**STE2.11 Soil and project management**

GEOP0006-3 *Soil quality evaluation and management* - Gilles COLINET - [6h FT] 18 12 [+] 2

GEST3020-1 *Conceiving and economic assessment of project : food crop and agroforestry* - 12 - [+] 2  
Baudouin MICHEL - [12h SEM]

**STE2.12 Environmental techniques**

CHIM9248-1 *Basic principles of wastewater treatments* - Frank DELVIGNE 24 - - 2

ENVT0036-1 *Sanitation and soil improvement* - Gilles COLINET - [12h AUTR] 6 - [+] 2

HYDR0009-2 *Hydraulic engineering and environmental aspects* - Aurore DEGRÉ - [3h AUTR] 15 6 [+] 2

**Period 2**

**STE2.21 Geomatics applied to the environmental management**

ENVT0045-1 *Geomatics and applied remote sensing* - Philippe LEJEUNE 28 44 - 5

**Choose one module from :**

**STE2.22 Machines 2/2**

Prerequisite

"STE1.23 Machines et constructions 1/2"

GERE0018-1 *Building physics and special techniques (2nd part)* - Frédéric LEBEAU - [6h 6 12 [+] 2  
AUTR]

GERE0007-2 *Digital electronics, second part* - Bernard HEINESCH 6 18 - 2

GERE0012-2 *Automatics and robotics in agriculture* - MarieFrance DESTAIN 12 12 - 2

**STE2.23 Environmental management**

ECON2248-1 *Environmental economy* - Kevin MARÉCHAL 24 - - 2

ENVT2052-1 *Environmental impact : concepts and methodology* - Catherine DUBOIS - [6h 18 - [+] 2  
SEM]

GEOL0009-1 *Space analysis and soil mapping* - Gilles COLINET, Sarah GARRÉ - [6h AUTR] 6 6 [+] 2

**Choose one module from :**

**STE2.24 Plants-Ecosystem-Climate (PEC) relations**

GBLX0156-1 *Theoretical aspects of PEC relationships* - Marc AUBINET 12 12 - 2

GBLX0157-1 *Experimental aspects of PEC relationships* - Bernard HEINESCH 12 12 - 2

GBLX0158-1 *Impact of disruptions on PEC exchanges* - Christine MOUREAUX 12 12 - 2

**STE2.25 Environmental technology**

ENVT0037-1 *Machines and environment* - MarieFrance DESTAIN - [3h AUTR] 9 12 [+] 2

ENVT2053-1 *Physical aspects of waste management* - Luc MINNE - [3h FT] 21 - [+] 2

ENVT2054-1 *Renewable energies* - Yves SCHENKEL - [4h FT] 20 - [+] 2

**HEC-ULg programme**

GEST3001-1 *People management and organisation* - Jocelyne ROBERT 24 24 - 4

GEST3002-1 *Human Resources* - Jocelyne ROBERT 24 - - 2

GEST3003-1 *Competitive strategy in the marketplace (english language)* - Michael GHILISSEN 16 16 - 3

GEST3004-1	<i>Marketing (operations and management)</i> (english language) - Michael GHILISSEN	16	16	-	<b>3</b>
GEST3005-2	<i>Accountancy and Finance</i> - Jacques BERWART	24	24	-	<b>4</b>
GEST3006-1	<i>Operations and supply chain management I</i> (english language) - Yasemin ARDA	16	16	-	<b>3</b>
GSTG3001-1	<i>Business plan</i> - COLLÉGIALITÉ	-	30	-	<b>4</b>
GSTG3002-1	<i>Functional analysis of a company</i> - COLLÉGIALITÉ - [30h Internship]	-	-	[+]	<b>4</b>

Choose one of the following courses :

GEST3010-1	<i>Operations and supply chain management II</i> - Sabine LIMBOURG	16	16	-	<b>3</b>
GEST3011-2	<i>ICT for Business</i> - Alain DUBOIS	16	16	-	<b>3</b>
GEST3012-1	<i>Financial and actuarial modelling</i> - Louis ESCH	16	16	-	<b>3</b>

Second semester

#### Compulsory courses

##### Period 3

##### STE2.31 Dissertation

RTFE2004-1	<i>Final thesis</i> - N...	-	-	-	<b>27</b>
MANA0005-1	<i>Portfolio (MA2)</i> - Philippe LEPOIVRE	-	-	-	<b>2</b>
LANG2958-1	<i>English language : final thesis</i> - Sophie DEPOTERRE, Estelle MAYARD - [12h AUTR]	-	-	[+]	<b>1</b>